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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,870	11/15/2000	Steve Granick	10322/9	7651

7590

08/26/2003

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 08/26/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/715,870

Applicant(s)

GRANICK ET AL.

Examiner

Ramsey Zacharia

Art Unit

1773

-- The MAILING DATE of this c mmunicati n appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-14, 17-20, 22-29 and 32-51 is/are pending in the application.
- 4a) Of the above claim(s) 32-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-14, 17, 18, 20, 22-25, 28 and 29 is/are rejected.
- 7) ☒ Claim(s) 8, 19, 26 and 27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s): ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14. 6) ☐ Other: .

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

2. Claims 32-51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 12.

Claim Objections

3. Claims 4 and 6 are objected to because of the following informalities: the term "C N" at the end of these claims appears to be a typographical error that should read -- C≡N --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. Claims 1-3, 5, 10-14, 17, 20, 22, 23, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. (Macromol. Rapid Commun., 18, 1997, pp 509-514) as evidenced by Andrianov et al. (U.S. Patent 5,529,777).

Wang et al. teach a film formed on a substrate comprising a layer of polyacrylic acid and a layer of polyvinylpyridine adhered together by hydrogen bonds (page 510). The acid groups of the polyacrylic acid are charge-forming groups and their hydrogen donating moiety is O-H. The

Art Unit: 1773

polyacrylic acid layer is formed from an aqueous solution, i.e. it is water soluble (page 511).

Polyvinylpyridine is also a water soluble polymer (see Andrianov et al., column 5, lines 11-15).

The substrate is pretreated with 3-aminopropyl silane prior to application of the polyacrylic acid layer (page 510).

The polyacrylic acid, polyvinylpyridine, and 3-aminopropyl silane read on the agent of claims 22 and 28.

Regarding claims 23 and 29, polyacrylic acid, polyvinylpyridine, and 3-aminopropyl silane also read on the bioactive agent because these claims merely require that the agent be a "bioactive agent" without specifying the degree or type of bioactivity exhibited by the agent. Polyacrylic acid, polyvinylpyridine, and 3-aminopropyl silane read on the bioactive agent of these claims since polyacrylic acid, polyvinylpyridine, and 3-aminopropyl silane should all have at least some affect on a biological system.

5. Claims 1-7, 10-13, 17, 18, 20, 22-25, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Stockton et al. (Macromolecules, 30, 1997, pp 2717-2725).

Stockton et al. teach a multilayer film comprising alternating layers of polyaniline and a nonionic polymer hydrogen bonded together (page 2717, column 1). Suitable nonionic polymers are water soluble and include polyvinylpyrrolidone, polyvinyl alcohol, polyacrylamide and polyethylene oxide (page 2717, column 1). The pH values of solutions of the nonionic polymer solutions are all less than 7 (page 2718, column 1), i.e. they are bases. The film is deposited on a substrate (page 2718, column 1). Polyaniline is water soluble since it is deposited from a water/solvent solution (page 2718, column 2).

Art Unit: 1773

The hydrogen bond donating moiety is N-H (from the polyaniline). The hydrogen bond accepting moieties are C=O (polyvinylpyrrolidone), O-H (polyvinyl alcohol), and C=O and/or N-H (polyacrylamide).

The polyaniline, polyacrylamide, polyvinylpyrrolidone, and polyethylene oxide read on the agent of claims 22, 24, and 28.

Regarding claims 23, 25, and 29, polyaniline, polyacrylamide, polyvinylpyrrolidone, and polyethylene oxide also read on the bioactive agent because these claims merely require that the agent be a "bioactive agent" without specifying the degree or type of bioactivity exhibited by the agent. Polyaniline, polyacrylamide, polyvinylpyrrolidone, and polyethylene oxide read on the bioactive agent of these claims since polyaniline, polyacrylamide, polyvinylpyrrolidone, and polyethylene oxide should all have at least some affect on a biological system.

Allowable Subject Matter

6. Claims 8, 19, 26, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter.

The invention of claim 8 is directed to a film that comprise a first layer and a second layer and does not contain a polymer layer comprising a plurality of permanently electrostatically charged groups. The first layer comprises a first polymer having a plurality of hydrogen bond donating moieties and the second layer comprises a second polymer having a plurality of hydrogen bond accepting moieties. The first and second polymers are soluble in

Art Unit: 1773

water and either the first polymer or the second polymer comprises carboxylic acid groups.

Moreover, the hydrogen bond donating moiety is selected from the group consisting of O-H, N-H, P-H, and S-H, while the hydrogen bond accepting moiety is selected from the group consisting of C=O, O-H, N-H, C-F, P=O, and C≡N.

Wang et al. and Stockton et al. represent the closest prior art. However, Wang et al. do not teach or fairly suggest a film as claimed wherein the hydrogen bond accepting moiety is selected from the group consisting of C=O, O-H, N-H, C-F, P=O, and C≡N. Stockton et al. do not teach or fairly suggest a film as claimed where the first of second polymer comprises carboxylic acid groups.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 1773

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (703) 305-0503.

The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non after-final correspondences and (703) 872-9311 for after-final correspondences.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

REZ

Ramsey Zacharia

8/14/03


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700